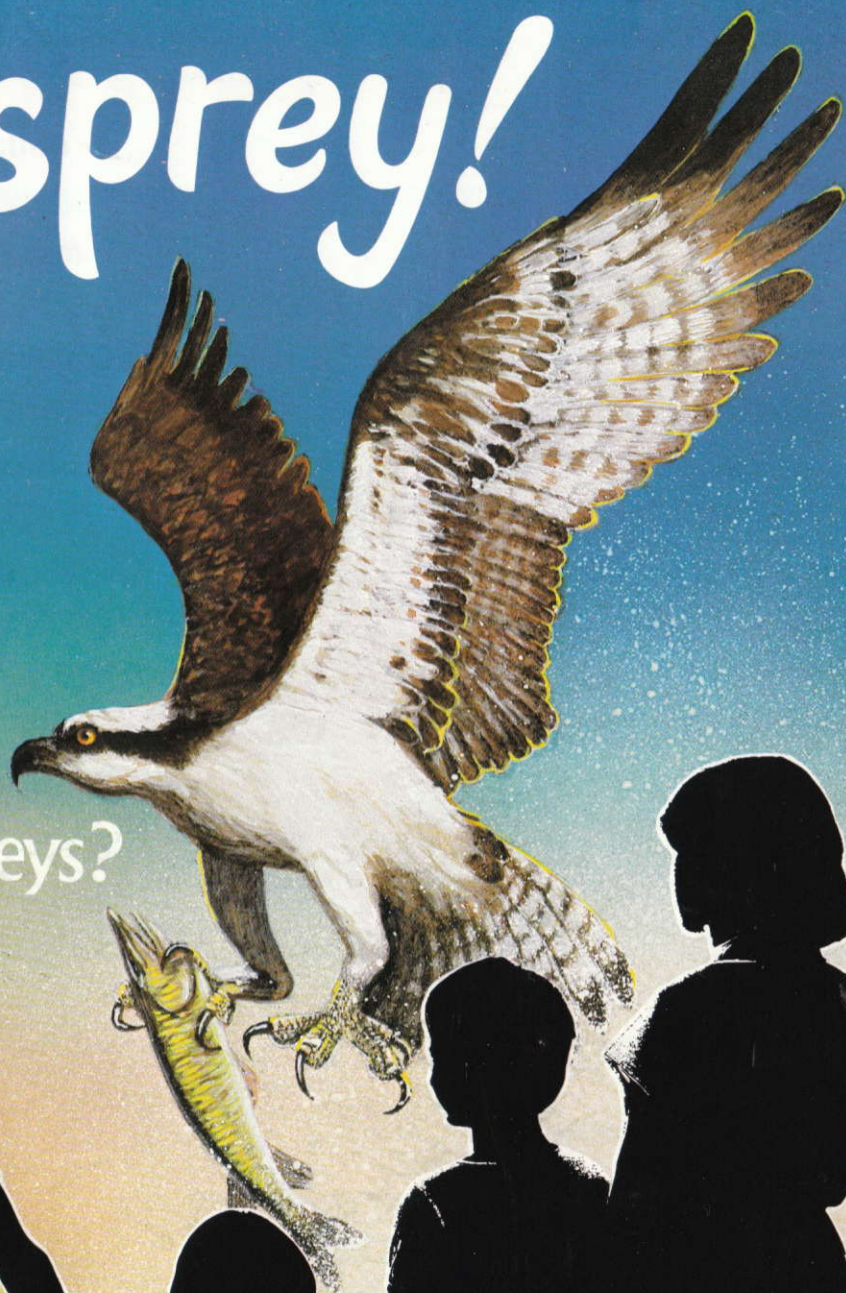


# Osprey!

Can  
you  
save  
the  
Ospreys?



RSPB

BES

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## ACKNOWLEDGEMENTS

We are grateful to the following individuals and organisations for permission to reproduce illustrations on the pages mentioned below:

Pages 4, 5, 6, 7 BES  
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Page 18 RSPB  
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# INTRODUCTION

Every year, in the spring, a special event gets mentioned on television and in the newspapers. I wonder what it means to you? "The Ospreys are nesting again at Loch Garten".

A bird; but what kind of bird? And why is it so special that the press and television bother to mention it? It's a story that goes back to the nineteenth century, to the reign of Queen Victoria, and because of what happened then, the Osprey became a very rare, special bird.

Thus, it is a story that merits a program all of its own – not just a wildlife program, or even a bird of prey program, but an Osprey program. Partly because it has been, and is, so closely observed, partly because of the clear action taken by the Royal Society for the Protection of Birds (RSPB) and the Scottish Wildlife Trust, it provides the ideal introduction to the pressures of the environment on wildlife. The program not only provides an enjoyable change from many of the currently available programs, but also is a story in itself – covering the history of the Scottish Osprey, the activities of conservationists, the habits of Ospreys and the hazards facing them. This booklet also helps you to understand more of the story, making the game even more enjoyable and – who knows? – stimulating you to visit Loch Garten, reading wider about the Ospreys or looking with new understanding at your local birds of prey.

In the program your objective is to allocate your wardens to enable your Ospreys to stay in Scotland, and rear young with the minimum of disturbance from the hazards surrounding them. The program has options so as to make your task easier or more difficult – the earlier you start to the date the Osprey first returned to Scotland, the harder it is for them to survive! The hazards come in many forms – egg stealers, huntsmen, tourists, fish farmers, and many others – keeping them at bay will require all your skills! You can see how you're doing during any year – and using the table on page 17 you can see if you're managing as well as did those dedicated workers from the RSPB, the Scottish Wildlife Trust and other volunteers.



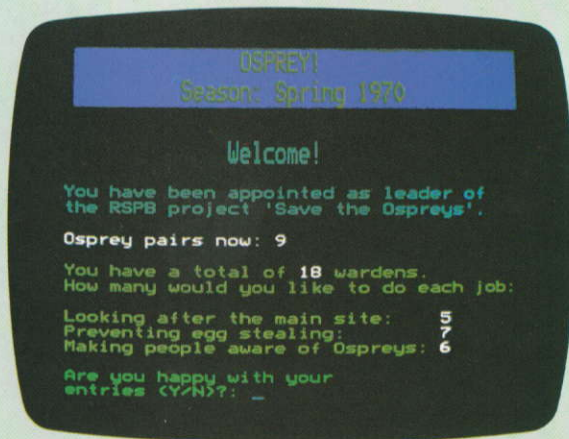
The Scottish  
Wildlife Trust



# THE PROGRAM

Your objective is to allocate your resources (wardens) to enable your Ospreys to successfully nest and breed with the minimum of disturbance from the hazards that surround them.

Your appointment and first decisions.



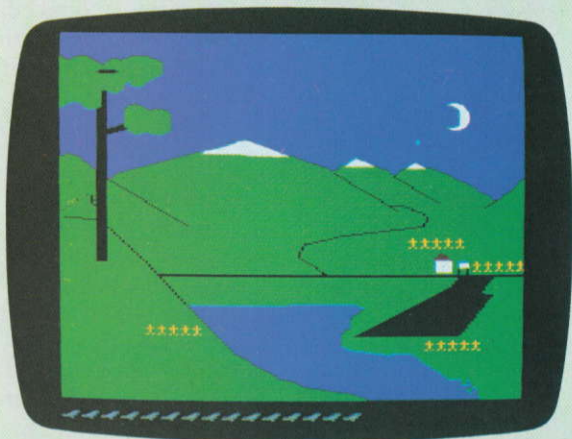
You are shown your allocation of wardens which you can use to protect the Ospreys. The earlier the year, the fewer the available resources and the harder your job. They are divided into those guarding the nests against egg stealers, those whose job is to look after the Loch Garten site, and finally those who look after general publicity.

After choosing which year to start (the earlier the year, the harder the game!) the screen will show how many Osprey pairs have returned to Scotland at the beginning of spring that year. You will need to allocate your wardens for the Spring (March-May) so as to give the best chances of survival to your Ospreys. Enter the appropriate numbers you have chosen for the first two categories and the third will appear to make up the difference to those available.

The next screen shows your decisions and their

effects! Initially the wardens arrive to take up their positions, followed by the Ospreys returning from their winter habitat. Then watch the egg stealers at work at dead of night, and the tourists drive your Ospreys away if you've made the wrong decisions!

Egg stealers at night.



The following screen shows the number of Osprey pairs and comments on major events which have occurred.

Mixed results.



Factors outside of your control such as the weather have affected your total. You then have to make decisions for the summer and subsequent seasons, until either you've lost your Ospreys or reached 1981. At any time, you can compare your

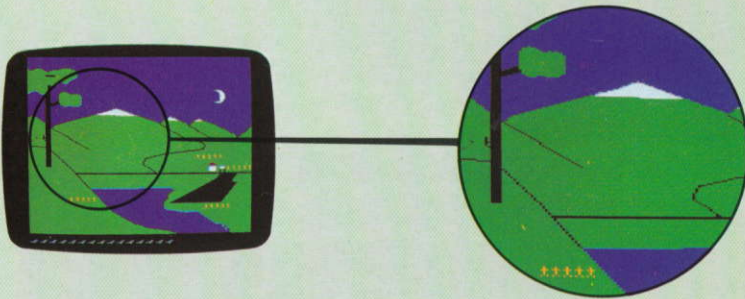


number of Ospreys with the actual number shown in the table on page 17.

In the section on 'Scottish Ospreys', you will find information on many more details of the Scottish Ospreys' history and environment. But to give you a start, here is some help to enable you to preserve the Osprey population. Reading the rest of this booklet, and doing further research as discussed in the chapter 'Things to do yourself' should enable you to do even better!

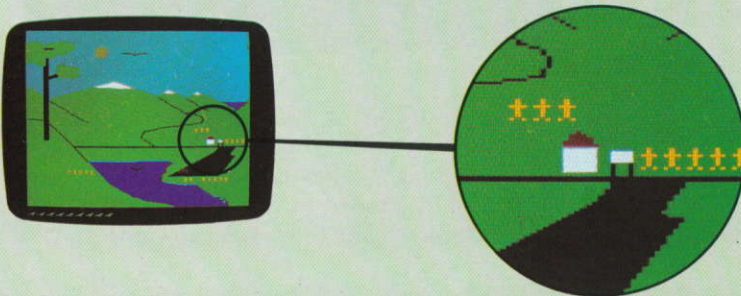
## Egg Stealers

Egg collectors are a big threat to your Ospreys, particularly in the early years when the Ospreys returned to Scotland. You will see your 'egg watching' wardens by the bottom of the tree – but beware of the collectors – they can slip past and up the tree if you don't have enough!



## Making people aware of Ospreys

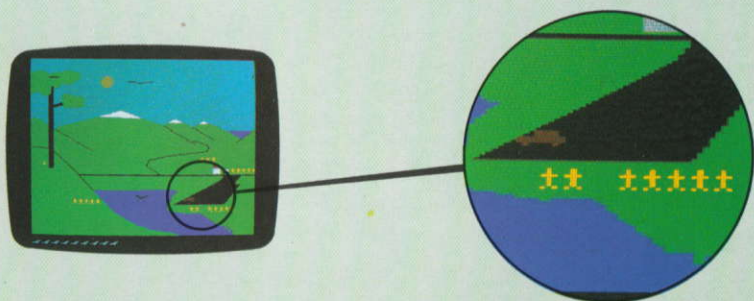
Good publicity will gain public support, protecting the Ospreys and informing tourists, bird-watchers, farmers and sportsmen.



Whilst having immediate results in diverting people to the site, it also ensures longer term benefits. The effectiveness of your wardens is shown by the number of cars which go into the car park, rather than pass straight by the site car park, and on to disturb your Ospreys!

## Site Management

The RSPB decided to encourage visitors to one site at Loch Garten, allowing people to view the Osprey whilst minimising the disturbance to the birds. This policy aimed to discourage the tourists and bird-watchers searching out other nests, maintain secrecy and prevent disturbance. However, you have to make sure that visitors to the site are well controlled! The amount of sound from the cars parked there will show how successful you have been. If your visitors are too noisy they'll frighten the Ospreys away.



### Please Note

*This program features a demonstration mode if no entries are made within 30 seconds of the appearance of the initial screen. See the appropriate section for your microcomputer in the 'Loading and Entries' chapter (pp. 27–32) for instructions to return to this initial screen.*





(the technique of mounting and stuffing the skins of animals to give a lifelike appearance) was a thriving craft.

Many Victorian households had a stuffed animal or bird in the glass case, and the collectors and museums had shelf upon shelf of them. It was not surprising, then, that the rarer species were much sought after, and fetched a very good price. Nor was there any criticism of those who killed rare animals or birds.

## No Help at Hand

By the middle of the nineteenth century the Osprey was becoming extremely rare in Scotland, and there are several frank descriptions of attacks on them in books by naturalists of the time, notably Charles St. John. These men clearly felt no shame at their exploits; although St. John says several times that he feels sorry to have destroyed such a bird, the ultimate effect on the species does not seem to have occurred to him.



Charles St John "collecting" an Osprey.

The Osprey became a rare visitor.



Persecution of the bird from all these directions led to the inevitable result: by the end of the nineteenth century no Ospreys bred successfully in Scotland; from 1910 onwards the bird was seen only as a rare visitor. Ornithologists, of course, were excited when there were reported sightings; but the Osprey was no longer regarded as a part of British bird life.

## The Osprey Lives



Then, in 1952, something happened which made those who longed to see this magnificent bird of prey nesting and breeding in its ancestral territories catch their breath and hope. There were unconfirmed rumours of a pair of nesting Ospreys. These rumours persisted in the next two years, and in 1955 there was definite news of nesting. The next few years were a time of hopes and disappointments, of constant day and night guarding of the nest site. In 1958 the unthinkable happened: despite the vigilance of the watchers, an egg thief got to the nest, and in his panic to escape from the furious guardians of the eggs, he dropped and broke them.

Finally, in 1959, the observers' passionate interest was rewarded: the pair of Ospreys arrived in the spring, built their nest, laid a clutch of eggs and reared three young Ospreys.



## Close Observation

THE SUNDAY TELEGRAPH  
JUNE 17, 1984

### Rare eggs stolen in thousands

By DAVID BROWN,  
Agricultural Correspondent

A RECORD number of eggs stolen from the nests of Britain's finest wild birds have been seized by police and officials of the Royal Society for the Protection of Birds in recent raids on houses throughout Britain.

The haul of "many thousands" has included osprey eggs from the Scottish Highlands, and the eggs of peregrine falcons, and other rare hawks.

Those birds must have been among the most observed and recorded in the world. Every detail of their breeding cycle was noted, and there was always someone on duty to observe, as far as they could, every movement of the pair and their young. Since that year the Ospreys have returned regularly, and in ever-increasing numbers. They still have to be watched and protected; most of the nesting sites are unknown to the general public. There are still egg collectors, and unhappily they are still prepared, as this newspaper article shows, to pay handsomely for a clutch of Osprey eggs. However, this constant watching has given us a great deal of information about the breeding cycle of the birds.

## Nest Building

The Osprey arrives in Scotland from the Gambia, in Africa, in the spring, usually during the first two weeks of April. It should be said that Ospreys pair for life, and return every year to traditional nesting sites.

The nest, or eyrie, takes two weeks to complete. It is made of large twigs and branches, sometimes so large that the Osprey can hardly carry them. The birds collect nesting materials in rather the same way that they catch fish: they swoop down to a tree, seize a dead-looking branch in their powerful talons and drag it away by force. Inside the nest is a cup shape lined with soft grass, made to hold the eggs. The nest of the Osprey is one of the largest built by any bird in the world; it is 90 cm deep and as large as a double bed.



The nest of the Osprey is as large as a double bed.



## Sitting on the Eggs

Once the nest is built the Ospreys mate very frequently – up to three hundred times – in order to produce two to four eggs. There are usually two or three, laid at intervals of about two days. By now it is late April. Once the eggs are laid the incubation period starts. During this time one of the birds sits on the eggs at all times to keep them at a constant, warm temperature. If for any reason the eggs are allowed to cool, they will not hatch.

This incubation period lasts for between thirty-five and thirty-eight days. Throughout this time the male feeds the female, although she is off the nest for periods of up to two hours during the day. During these times the male sits on the eggs. However, the female bears the main responsibility for sitting: she sits all night, and incubates the eggs for about four-fifths of the total period. The male's responsibility is to feed both the female and her



young; he does all the fishing from the start of the courtship until the time when the young leave the nest.

## A Busy Father

The eggs hatch in early June, and from this time on, the male is extremely busy. The Osprey is well-equipped for diving for food: the eyes have a membrane which slides over to protect them during a dive, and the nostrils can be completely closed.



When the male has caught a fish he takes it to a perch where he feeds, then takes it to the female who carries it to the perch herself to feed, while the male incubates the eggs. Once they are hatched, of course, the mother feeds the young in the nest. An adult Osprey needs one fish a day, but once the brood has hatched the male has to catch four to six fish a day.

The mother feeds the young in the nest.



Diving for fish is not as easy as it may seem. On average only about one dive in three is successful, and there are long periods when the Osprey perches motionless waiting for a fish to appear. Both heavy rain and cold weather threaten the food supply: in heavy rain the surface of the water is broken up so that the bird cannot see its prey, and in cold weather the fish lie too deep to be caught. Most of the fish caught by the Osprey are basking near the surface. Trout is the most common prey, followed by pike. In salt water bays the flounder is the most easily available fish.



Trout



Pike



Flounder

The variety of fish for the Osprey to catch is limited in Scotland: there are only six or seven different species, whereas in their European breeding grounds there are as many as twenty-eight. Although four to six fish a day doesn't seem very many, the bird will be searching for prey constantly with its powerful vision; a steady supply of fish is essential for the chicks, who will quickly weaken if there is a shortage of food, and can easily die if it is combined with cold weather.

## Growing Up

When the chicks first hatch they are featherless and very reptilian in appearance, but they develop rapidly and are fully grown after eight weeks. At this stage the male tries to reduce the food supply to encourage the young to fly. The female still feeds them, however, so four or five fish a day are still needed.



Young Chicks are featherless and very reptilian in appearance.

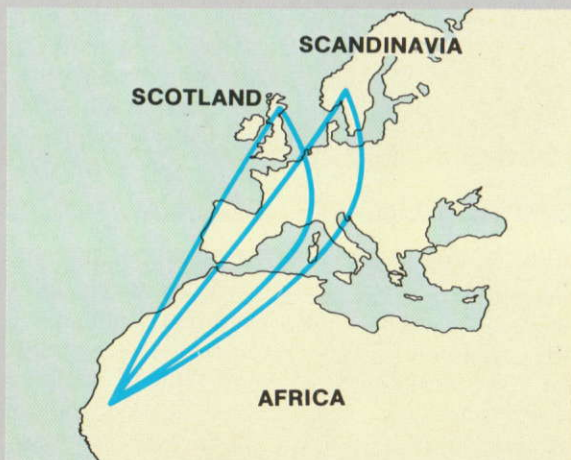


In mid-August, at any time between fifty and fifty-nine days old, the chicks are ready to try out their wings. Once again the male plays an encouraging role; he tries to coax the young to fly by hovering around them holding a fish in his beak.

## Leaving Home



Soon autumn comes. By this time the young are completely independent. One by one the Ospreys set off on their long journey to Africa. Some will never arrive; they may be blown off course, or die in a severe storm. Some will be shot as they pass over Italy, where there are no restrictions on the shooting of wild birds. Others will die on the return journey; but the number of Ospreys returning to the Highlands of Scotland continues to increase steadily.



Ospreys migrate to Africa for the winter.

# Scottish Osprey Population 1954-81

Year	Pairs Breeding	Successful	Failed
1954	1	1	0
1955	1	0	1
1956	1	0	1
1957	0	0	0
1958	1	0	1
1959	1	1	0
1960	1	1	0
1961	1	1	0
1962	1	1	0
1963	2	0	2
1964	2	1	1
1965	2	1	1
1966	2	0	2
1967	3	2	1
1968	3	2	1
1969	4	3	1
1970	6	3	3
1971	7	5	2
1972	12	6	6
1973	13	10	3
1974	14	10	4
1975	9	7	2
1976	14	10	4
1977	15	6	9
1978	22	11	11
1979	25-26	16-17	9-11
1980	20	19	1
1981	22	20	2



## Danger



Crows steal the eggs and attack the chicks.

However, successful though the Ospreys may have been in the last twenty-five years, we cannot be complacent. There are still many hazards, both natural and man-made, which could threaten these birds. Of the natural hazards, the main dangers are to the eggs and chicks. These include crows, which will steal the eggs and attack the chicks, and bad weather: rain, which prevents the male from fishing, and cold weather can quickly kill the chicks.

There are, too, potential man-made hazards. Fish farms, which are of course an alluring source of food to the Osprey, have to be protected. Fortunately liaison between the fish farm managers and the RSPB, the Royal Society for the Protection of Birds, has resulted in the netting of trout fisheries, and since they are secure there is no danger of Ospreys being shot to protect the fish.



Crop spraying.

Crop spraying is another factor which may endanger the future, not only of the Osprey, but of wildlife in general. Mercurial fungicides have long been used in Britain as seed dressings; it is thought that these may cause problems such as infertility in certain species, but research into this is complicated and has not yet led to any definite conclusions.



Organo-chlorines, used as pesticides, are known to leach into lakes and rivers, so may cause problems. However, it must be said that Ospreys tend to have their territory in areas where there is not a great deal of arable farming, so this may not be a serious problem.

Acid rain, produced by an excess of sulphur in the atmosphere, has started to become a problem in Scandinavia, and there is little doubt that this is an increasing hazard to wildlife throughout the world.

## Watch Out-Man About

There are two more straightforward dangers to the Ospreys. One of these has not changed since Victorian times: egg stealers. As the Osprey population grows and the eggs become less of a rarity this problem diminishes, but there always seem to be people selfish enough to want either to find Osprey eggs for themselves, or to pay others to obtain them. The other danger is that of disturbance of the birds by well-meaning or thoughtless tourists who go much too close to a nest to observe or to photograph the occupants. This is a particular danger during the incubation period. The RSPB has a policy of giving extensive publicity to one site, at Loch Garten, where tourists can view the Osprey nest in a controlled situation. The Scottish Wildlife Trust has a similar site. The idea is that tourists will visit these two nests rather than searching the countryside for other nests. High-powered binoculars are provided so that a good view of the birds can be obtained.

## Keep Awake

All these dangers are under control at the moment; but constant vigilance is important if they are to remain under control. The balance can so easily be disturbed. Some new chemical hazard or new farming technique could be introduced; any reduction in the publicity given to the Ospreys and their needs could leave people ignorant of their value and interest.





## Guardians of the Osprey

The part played by the Royal Society for the Protection of Birds in the story of the Osprey has been a vital one. It was they who guarded the first nest with such diligence, and in the face of such heartbreaking disappointment and failure. They supported the controversial idea of setting up the Osprey viewing station at Loch Garten, and have been running it ever since. Above all, their publicity work, their lectures, films and leaflets, have done more than anything else to educate public, farmers and land-owners into a greater understanding and appreciation of the Osprey.

Loch Garten.

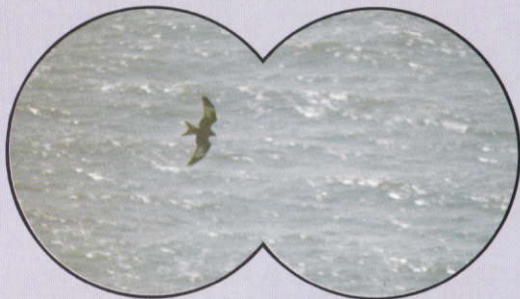




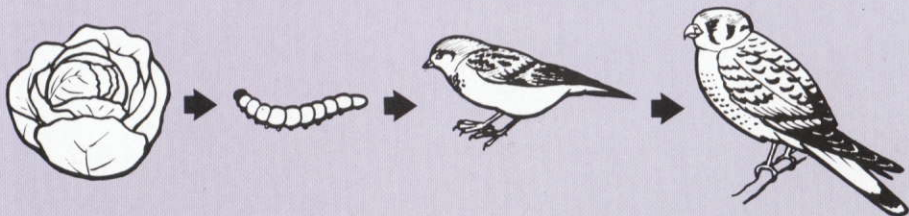
# THINGS TO DO YOURSELF

## Ideas for Younger Users to follow up

1. What birds of prey are found in your area? What is their habitat and breeding cycle?
2. What are the other rare birds of prey in Britain? There is a bird of prey in Wales which is very rare. What is it? How can we help to make it safer?



3. See if you can discover all about the life of the Osprey when it leaves us in the autumn. What countries does it pass through? Find out about its life in Africa.
4. There are several animals which have come close to extinction in this country during this century. What are they? Do you think we can do anything to help bring them back?
5. Birds of prey are part of a pattern in nature which keeps a good balance of plants, birds, animals, fish, insects, man, etc. This is called Ecology. Can you find out about some of the patterns?, e.g. Sparrowhawks eat small birds which eat insects which destroy plants.



6. In the nineteenth century people who had emigrated to New Zealand felt homesick. So they brought out from England animals and birds, such as rabbits and sparrows, to make them feel more at home. Do you think this was a good idea? What do you think happened?
7. How would you protect the Osprey from egg-stealers? Draw up a plan of campaign to guard an Osprey nest throughout the spring and summer.
8. From all that you have learnt, see if you can draw a detailed picture of the life of a pair of Ospreys. Show the eggs in the nest, the mother sitting, the young birds, and the father fishing for food.
9. Ospreys are found in a particular area of Britain – the Highlands of Scotland. What other animals and birds are found in that area? What are the soil and vegetation like? Find out all that you can.





## Places where you can see Ospreys

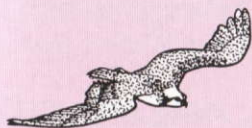
The Loch Garten Reserve has an RSPB Observation Post which is open from April to late August providing the birds are nesting. The rest of the reserve is open throughout the year.



Further details from the Warden at Grinian, Nethy Bridge, Inverness-shire or from RSPB Scottish Office, 17 Regent Terrace, Edinburgh. The Scottish Wildlife Trust has an Observation Post a few miles away, at Boat of Garten.



# BIBLIOGRAPHY (a list of books which give you more information)



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water Birds.* Felix, J. Publisher: Octopus 1975.



## **OTHER BES PROGRAMS**

**Other programs in the range include:**

### **Timeman One**

The program helps children tell the time and set a clock. Attractive scoring with a man and a ladder keep childrens' interest. Choice of twelve progressive stages of difficulty, together with the usual attractive sound, colour and monitoring facilities. (Age 4–9 years).

### **Timeman Two**

Companion program covering minutes to the hour, half and quarter hours and the 24-hour clock. Same attractive features as Timeman One with progressive stages of difficulty, together with attractive sound, colour and monitoring facilities. (Age 4–10 years).

### **Happy Numbers**

A program to help children learn their numbers and count without need of reading skills. Attractive graphics and scoring make this a favourite with 3 to 5 year olds.

### **Happy Letters**

The program to teach children to match small and capital letters both on the screen and the keyboard. They love trying to stop the crocodile eating the fishes. Features attractive use of sound and colour as well as easy identification of problem letters for further practice. (Age 3–6 years).



## **World-Wise**

Two programs to stimulate children to 'teach the computer' about geography. Encourages the use of atlases and reference books, helps exam studies and introduces the use of the computer to store information. Data can be readily saved and re-loaded at any time. (Age range 7–15 years).

## **Map Rally**

Try to find the hidden checkpoints in a race against your opponent or the clock! Map co-ordinates and directions are soon mastered as children learn to control the cars. After each rally they can watch the cars retrace their routes taken, showing how well each driver did. (Age 7–13 years).

## **Happy Writing**

The program helps children form their letters and numbers correctly and encourages them to practise writing. A moving pencil point shows clearly where to start each figure. Tractors, attractive colour and sound all help to keep their interest. (Age 3–5 years).

## **Animal/Vegetable/Mineral**

This program provides hours of fun enjoyment as the computer tries to guess the object a child has thought of. The computer's failure to guess correctly encourages children to help the computer to tell the difference between the various objects. The program stimulates discussion and the use of reference books. Suitable for all ages 7 years and upwards.

## **Wordhang**

This version of the traditional 'Hangman' spelling game has been described as "... the Rolls-Royce of them all!" Features over 250 words plus the ability to enter your own words – either individually or as a group (ideal for that weekly spelling list!). Improves spelling at all ages of 5 years and upwards.

# LOADING AND ENTRIES

## BBC AND ELECTRON Microcomputers

### Loading

It is best to press the CTRL and BREAK keys or to switch off and on again to clear the computer before loading.

#### 1. Cassette Version

Place the cassette in the recorder with the label upwards/outwards and ensure it is wound back to the beginning of the program. If you have a disc interface fitted to your BBC then you must type the normal \*TAPE to access the tape recorder.

To run the programs, simply enter **CHAIN "OSPREY"**. As usual, it may be necessary to adjust the volume level of your tape recorder to obtain satisfactory loading conditions. The first section of the program loads in a few seconds and will indicate completion with a 'bleep' whereupon the loading screen will be displayed.

Please note that the program will then automatically go on to load the second (main) section of the program and so the recorder should not be switched off. Loading the main program takes approximately four minutes.

#### 2. Disc Version

Place the disc in the drive, label side uppermost, label in last. Close the drive door. Whilst holding the SHIFT key down, press and release the BREAK key. When the program starts to load, release the SHIFT key. After a few seconds, during which the disc will rotate as the program loads, the title and copyright screen will be displayed. This indicates satisfactory loading. Should you encounter difficulty, check the following before trying again:

- Is the disc in the drive label up/label in last?
- Is the drive door properly closed?
- Is the disc in the correct drive?

Having completed loading, the program displays the title and copyright screen for a few seconds. No



entries are necessary and the program will automatically move on to the initial screen.

### Entries

Press RETURN after each entry. Press ESCAPE to return to the initial screen.

## Amstrad CPC 464

### Loading

It is best to press CTRL and SHIFT and whilst holding them down, press and release the ESCape key. This resets the Computer before loading. The cassette should be placed in the Datacorder with the label upwards and the tape wound back to the beginning.

Simply press CTRL and the small ENTER key, followed by pressing the PLAY key on the Datacorder and then pressing any other key.

Loading the program takes about five minutes in all.

Having completed loading, the program displays the title and copyright screen for a few seconds. No entries are necessary and the program will automatically move on to the initial screen.

### Entries

Press ENTER after each entry. Press ESCape twice to return to the initial screen.

## Commodore 64

### Loading

It is best to switch the computer off and then on again to clear the computer before loading.

1. **Cassette Version** The cassette should be placed in the recorder label upwards and the tape wound back to the beginning. Whilst holding down the SHIFT key press and release the RUN/STOP key. Release the SHIFT key and press PLAY on the recorder. The program will load in approx. two minutes.
2. **Disc Version** Place the disc in the drive, label side uppermost, label in last. Close the drive door. Type in **LOAD** **"\*\*", 8** followed by pressing RETURN. When **READY** appears on the screen type in **RUN** then

press RETURN. The program will load in approx. half a minute.

#### **Entries**

Press RETURN after each entry. Press RUN/STOP to return to the initial screen.

## **Spectrum 48k**

#### **Loading**

It is best to enter **NEW** to clear the computer before loading. The cassette should be placed in the recorder label upwards. Ensure that it is wound back to the beginning. To run the program simply enter **load "osprey"**. As usual, it may be necessary to adjust the volume level of your tape recorder to obtain satisfactory loading conditions. The first section of the program loads in a few seconds whereupon the title screen will be displayed.

Please note that the program will then automatically go on to load the second (main) section of the program and so the recorder should not be switched off. Loading of the main program takes approximately two minutes.

Having completed loading, the program will automatically move on to the initial screen.

#### **Entries**

Press ENTER after each entry. To return to the initial screen press X (for exit) in the text screen instead of entering the number of wardens.

## **MSX Microcomputers**

#### **Loading**

It is best to switch the computer off and then on again to clear the computer before loading. The cassette should be placed in the recorder label upwards/outwards. Ensure that it is wound back to the beginning. Get into BASIC (see your computer manual for the exact method for your micro) and simply enter **LOAD "cas:",r**. As usual, it may be necessary to adjust the volume level of your tape recorder to obtain satisfactory loading conditions. The first section of the program loads in a few seconds whereupon the title screen will be displayed.



Please note that the program will then automatically go on to load the next sections of the program and so the recorder should not be switched off.

Having completed loading, the program will automatically move on to the initial screen.

### Entries

Press RETURN after each entry. To return to the initial screen press X (for exit) in the text screen instead of entering the number of wardens.

## Please note:

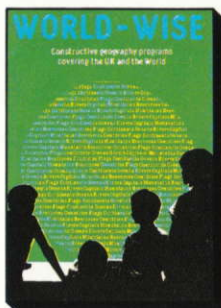
This program is available in different versions for a number of popular microcomputers and variations may occur due to the characteristics of different micros. The screen displays illustrated are from a version for the BBC microcomputer and may not be an exact representation of the image produced on the screen for any given computer.

In the event of any problem with the use of this program, or ideas as to improvements which could be incorporated, please do not hesitate to contact BES.

BES is always interested to discuss with users any ideas they may have for other programs.

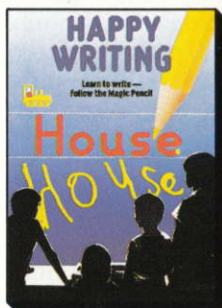


# What the Press say about BES programs...



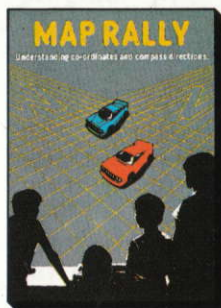
"The program has been well written to help the user along with the question and answer sequence."

*Personal Computing Today*



"... Happy Writing turns out to be a really cleverly designed program that helps children with letter formation in a unique and well thought out way."

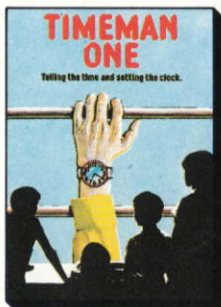
*Educational Computing*



"Map rally is an enjoyable set of programs ...

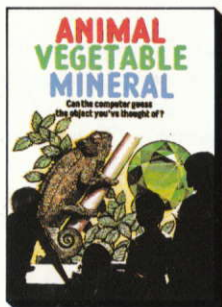
There are full instructions which guide the user simply but effectively."

*Educational Computing*



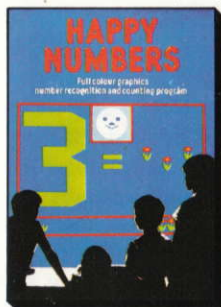
"... an entertaining and highly instructive program which has been thoughtfully designed to appeal to children."

*The Micro User*



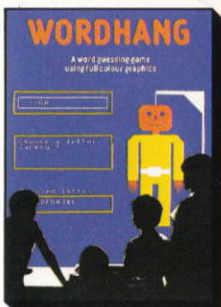
"... one of those rare programs which takes a good simple idea and translates it into an equally good and easy to use piece of software."

*The Micro User*



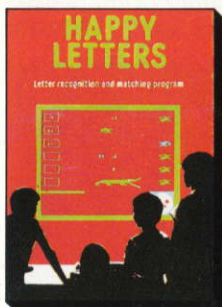
"There is no doubt that children will learn about counting while playing this program."

*Personal Computing Today*



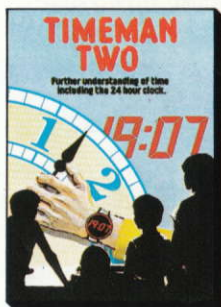
"Hangman programs proliferate for every micro, but Wordhang is the Rolls-Royce of them all."

*Acorn User*



"Happy Letters is an exciting and worthwhile program. The graphics are simple but effective and certainly appeal to young children."

*Educational Computing*



"... The happy face graphic was popular, but the person who climbs up and down the ladder, depending on the answers really was fun."

*Educational Computing*

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